

## **Regional HIV/AIDS Epidemiologic Profile of City of Worcester, Massachusetts: 2015**

### **Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data**

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Disease, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2015, this resulted in the removal of 4,401 HIV/AIDS cases, of which 1,021 have died and 3,380 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location at diagnosis, is the basis for MDPH service planning. Please note that previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual risk category for men; those cases have been reassigned to the no identified risk (NIR) category. The presumed heterosexual risk category was used with the intention of identifying HIV risk for women when sex with men is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. The application of the presumed heterosexual risk category to men is overly inclusive in that woman to man HIV transmission is biologically less probable, and there are alternate risks that are possible for men, including sex with other men (MSM) or IDU. The CDC reports men diagnosed with HIV/AIDS who report sex with women as their only risk factor, without corresponding partner risk or HIV status information, in the NIR category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for men in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual risk categories for women.

**Table 1. Total number of people reported with HIV infection or AIDS<sup>1</sup> by mortality status on December 31, 2014: City of Worcester, Massachusetts<sup>2</sup>**

	<b>N</b>	<b>%</b>
People Living with HIV/AIDS	947	58%
People Reported with HIV or AIDS who are Deceased	677	42%
Total Number of People Reported with HIV Infection or AIDS	<b>1,624</b>	<b>100%</b>

<sup>1</sup> Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/15

**Table 2. Average annual rate of HIV infection diagnosis from 2011 to 2013 and HIV/AIDS prevalence rate on 12/31/14<sup>1</sup>: City of Worcester, Massachusetts<sup>2</sup>**

<b>Average annual HIV diagnosis rate from 2011–2013</b>	<b>Average rate per 100,000</b>	<b>Average annual number of HIV diagnoses</b>
City of Worcester, MA	17.4	26.7
Massachusetts Total	10.7	701.3

  

<b>HIV/AIDS prevalence rate on 12/31/14</b>	<b>Rate per 100,000</b>	<b>Number of people living with HIV/AIDS</b>
City of Worcester, MA	618.7	947
Massachusetts Total	301.5	19,737

<sup>1</sup> The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/15

**Table 3. People living with HIV/AIDS<sup>1</sup>, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year<sup>2</sup>: 2004–2013, City of Worcester, Massachusetts<sup>3</sup>**

<b>Year</b>	<b>HIV/AIDS Prevalence</b>	<b>Deaths among those with HIV/AIDS</b>	<b>Diagnosis of HIV Infection</b>
2004	788	28	50
2005	791	29	32
2006	826	20	55
2007	843	24	41
2008	858	16	31
2009	870	14	26
2010	896	13	39
2011	913	8	25
2012	919	17	23
2013	940	11	32

<sup>1</sup> Number of people living with HIV/AIDS on 12/31 of each year

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/15

**Table 4. People diagnosed with HIV infection from 2011–2013<sup>1</sup> and people living with HIV/AIDS on December 31, 2014 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: City of Worcester, Massachusetts<sup>2</sup>**

HIV Infection Diagnoses			PLWH/A	
Gender:	N	%	N	%
Male	51	64%	546	58%
Female	29	36%	401	42%
Place of Birth:	N	%	N	%
US	37	46%	489	52%
Puerto Rico/US Dependency <sup>3</sup>	9	11%	200	21%
Non-US	34	43%	258	27%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	15	19%	276	29%
Black (non-Hispanic)	36	45%	306	32%
Hispanic/Latino	26	33%	335	35%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	23	29%	190	20%
Injection Drug Use (IDU)	8	10%	267	28%
MSM/IDU	-- <sup>7</sup>	-- <sup>7</sup>	35	4%
Heterosexual Sex	6	8%	191	20%
Other	-- <sup>7</sup>	-- <sup>7</sup>	21	2%
Total Undetermined	40	50%	243	26%
• Presumed Heterosexual Sex <sup>4</sup>	19	24%	126	13%
• Undetermined <sup>5</sup>	21	26%	117	12%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2014	
Under 13	-- <sup>7</sup>	-- <sup>7</sup>	-- <sup>7</sup>	-- <sup>7</sup>
13 to 19	-- <sup>7</sup>	-- <sup>7</sup>	-- <sup>7</sup>	-- <sup>7</sup>
20 to 24	11	14%	10	1%
25 to 29	8	10%	38	4%
30 to 34	10	13%	37	4%
35 to 39	13	16%	58	6%
40 to 44	11	14%	100	11%
45 to 49	10	13%	153	16%
50 to 54	8	10%	193	20%
55 to 59	-- <sup>7</sup>	-- <sup>7</sup>	177	19%
60+	-- <sup>7</sup>	-- <sup>7</sup>	178	19%
<b>Total<sup>6</sup></b>	<b>80</b>	<b>100%</b>	<b>947</b>	<b>100%</b>

<sup>1</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Ninety-nine percent of people diagnosed with HIV infection from 2011–2013 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands.

<sup>4</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>5</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>6</sup> Total includes Asian/Pacific Islander, American Indian/Alaska Native, other and unspecified race/ethnicity.

<sup>7</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15

**Table 5. People living with HIV/AIDS on December 31, 2014 by gender and race/ethnicity: City of Worcester, Massachusetts<sup>1</sup>**

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	201	37%	75	19%
Black (non-Hispanic)	148	27%	158	39%
Hispanic/Latino	175	32%	160	40%
<b>Total<sup>2</sup></b>	<b>546</b>	<b>100%</b>	<b>401</b>	<b>100%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Total includes Asian/Pacific Islander, American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15

**Table 6. People living with HIV/AIDS on December 31, 2014 by gender and exposure mode: City of Worcester, Massachusetts<sup>1</sup>**

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	190	35%	N/A	N/A
Injection drug use (IDU)	159	29%	108	27%
MSM/IDU	35	6%	N/A	N/A
Heterosexual sex	49	9%	142	35%
Other	9	2%	12	3%
Total Undetermined	104	19%	139	35%
• Presumed heterosexual sex <sup>2</sup>	N/A	N/A	126	31%
• Undetermined <sup>3</sup>	104	19%	13	3%
<b>Total</b>	<b>546</b>	<b>100%</b>	<b>401</b>	<b>100%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>3</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15

**Table 7. People diagnosed with HIV infection by gender and year of diagnosis: City of Worcester, Massachusetts<sup>1</sup>, 2004–2013<sup>2</sup>**

	Male		Female		Total
	N	%	N	%	
2004	24	48%	26	52%	50
2005	22	69%	10	31%	32
2006	29	53%	26	47%	55
2007	25	61%	16	39%	41
2008	14	45%	17	55%	31
2009	18	69%	8	31%	26
2010	23	59%	16	41%	39
2011	17	68%	8	32%	25
2012	15	65%	8	35%	23
2013	19	59%	13	41%	32

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15

**Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: City of Worcester, Massachusetts<sup>1</sup>, 2004–2013<sup>2</sup>**

	White Non-Hispanic		Black Non-Hispanic		Hispanic/Latino		Total <sup>3</sup>
	N	%	N	%	N	%	N
2004	17	34%	16	32%	15	30%	50
2005	8	25%	13	41%	10	31%	32
2006	9	16%	26	47%	16	29%	55
2007	13	32%	18	44%	9	22%	41
2008	6	19%	11	35%	12	39%	31
2009	7	27%	12	46%	5	19%	26
2010	7	18%	21	54%	9	23%	39
2011	6	24%	8	32%	9	36%	25
2012	3	13%	10	43%	9	39%	23
2013	6	19%	18	56%	8	25%	32

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Totals include Asian/Pacific Islander, American Indian/Alaskan Native individuals, and those of other or undetermined race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15

**Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: City of Worcester, Massachusetts<sup>1</sup>, 2004–2013<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	N
2004	22	44%	9	18%	19	38%	50
2005	14	44%	8	25%	10	31%	32
2006	21	38%	9	16%	25	45%	55
2007	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	20	49%	41
2008	11	35%	10	32%	10	32%	31
2009	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	9	35%	26
2010	13	33%	5	13%	21	54%	39
2011	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	9	36%	25
2012	11	48%	5	22%	7	30%	23
2013	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	18	56%	32

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-eight percent of people living with HIV/AIDS in MA who were born in a US dependency were born in Puerto Rico, 2% were born in US minor outlying areas, <1% were born in the US Virgin Islands, and <1% were born in Guam.

<sup>4</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15

**Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: City of Worcester, Massachusetts<sup>1</sup>, 2004–2013<sup>2</sup>**

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX <sup>3</sup>		Undeter- mined <sup>4</sup>		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2004	8	16%	10	20%	-- <sup>5</sup>	-- <sup>5</sup>	17	34%	-- <sup>5</sup>	-- <sup>5</sup>	10	20%	-- <sup>5</sup>	-- <sup>5</sup>	50
2005	7	22%	11	34%	0	0%	-- <sup>5</sup>	-- <sup>5</sup>	0	0%	5	16%	6	19%	32
2006	12	22%	7	13%	-- <sup>5</sup>	-- <sup>5</sup>	9	16%	0	0%	16	29%	10	18%	55
2007	14	34%	5	12%	0	0%	5	12%	0	0%	9	22%	8	20%	41
2008	-- <sup>5</sup>	-- <sup>5</sup>	8	26%	0	0%	7	23%	-- <sup>5</sup>	-- <sup>5</sup>	7	23%	6	19%	31
2009	6	23%	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	5	19%	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	8	31%	26
2010	10	26%	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	8	21%	0	0%	8	21%	8	21%	39
2011	6	24%	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	0	0%	-- <sup>5</sup>	-- <sup>5</sup>	8	32%	25
2012	7	30%	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	0	0%	0	0%	7	30%	-- <sup>5</sup>	-- <sup>5</sup>	23
2013	10	31%	-- <sup>5</sup>	-- <sup>5</sup>	0	0%	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	8	25%	9	28%	32

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15



**Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: City of Worcester, Massachusetts<sup>1</sup>, 2004–2013<sup>2</sup>**

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2004	21	50	42%
2005	9	32	28%
2006	17	55	31%
2007	19	41	46%
2008	15	31	48%
2009	10	26	38%
2010	11	39	28%
2011	11	25	44%
2012	7	23	30%
2013	9	32	28%

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.  
Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/15

**Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: City of Worcester, Massachusetts,<sup>1</sup> 2011–2013<sup>2</sup>**

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
<b>Gender:</b>	<b>N</b>	<b>N</b>	<b>%</b>
Male	17	51	33%
Female	10	29	34%
<b>Race/Ethnicity:</b>	<b>N</b>	<b>N</b>	<b>%</b>
White (non-Hispanic)	5	15	33%
Black (non-Hispanic)	14	36	39%
Hispanic/Latino	8	26	31%
Asian/Pacific Islander	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>
Other/Undetermined <sup>3</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>
<b>Place of Birth:</b>	<b>N</b>	<b>N</b>	<b>%</b>
US	12	37	32%
Puerto Rico/US Dependencies <sup>4</sup>	0	9	0%
Non-US	15	34	44%
<b>Total</b>	<b>27</b>	<b>80</b>	<b>34%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes American Indian/Alaska Native, other and unspecified race/ethnicity.

<sup>4</sup> Ninety-nine percent of people diagnosed with HIV infection from 2011–2013 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands.

<sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15